

1. REMARKS ON A SPECIMEN OF ALEPISAURUS FEROX RECENTLY OBTAINED AT MADEIRA. BY JAMES YATE JOHNSON, CORR. Mem. Z.S.

Having lately procured a specimen of this rare and interesting fish (which I have had the pleasure of presenting to the British Museum). I beg leave to lay before the Society the result of my observations upon it when in a fresh state. The remarks I shall make will be for the most part supplementary to Mr. E. T. Bennett's long description of another specimen from this locality, printed in the first volume of the 'Transactions of the Zoological Society\*,' but I hope they will be found to have some bearing upon the question of the ichthyological position of the genus, which has been placed in no fewer than four families by different naturalists. Mr. Lowe, who founded the genus on the present species, placed it in Cuvier's family of *Tænioides*. M. Valenciennes referred the genus to the *Salmonidæ*. Sir John Richardson, in his article on Ichthyology in the 'Encyclopædia Britannica,' assigned it, on page 213, to the *Sphyrænidæ*, and on page 248 to the *Scopelidæ*. Lastly, that able ichthyologist, Dr. Günther, asserts that its natural affinity is decidedly Siluroid (Cat. Acanth. Fishes in Brit. Mus. ii. p. 353). A consideration of Mr. Bennett's description and of the additional points about to be mentioned, some of which appear to have been hitherto overlooked, will lead, I think, to the conclusion that the position assigned to this fish by Dr. Günther is the true one.

The specimen lately obtained is  $53\frac{1}{2}$  inches long, the head measuring  $7\frac{3}{8}$  inches. The height of the body in front of the pectoral fin is  $4\frac{1}{4}$  inches. The branchiostegal membrane is supported by seven rays, which number may probably be taken as the normal one, as it agrees with one of Mr. Lowe's specimens, the other of which had six rays in that membrane. The fish has no barbels, in which negative character it resembles the genus *Batrachocephalus*, a member of the *Siluridæ*. The large eye ( $1\frac{1}{8}$  inch in diameter) is surrounded by an adipose skin, which, on the posterior side, intrudes as a transparent veil upon the eye, covering it to the extent of one-third.

The *subopercle* of which Mr. Bennett spoke appears to be the *interopercle*, which has been extraordinarily developed at the expense of the *subopercle*, the latter being wanting. Both this and the *opercle* (which measures 2 inches across) are remarkable for their paper-like tenuity and the high radiating striatures on their surfaces. The hinder portion of the preopercle forms a strong bony ridge, also striated. The *coracoid* is very broad at its middle, where it is sculptured with radiating striæ like the clavicle. The suprascapular and the narrow scapular are longitudinally striated. The striæ on all the bones are strong.

The remarkably high first dorsal fin has forty-one rays, and the deeply-forked caudal fin nineteen rays, whilst the second dorsal is adipose—in these respects agreeing with Mr. Bennett's description ;

\* See Trans. Zool. Soc. vol. i. p. 395.

but the pectoral fin has fourteen in place of fifteen rays, the ventral fin ten in place of nine rays, and the anal fin sixteen in place of seventeen rays. The first ray of the *pectoral* fin in the fish examined by Mr. Bennett was the longest. In this specimen the fifth and sixth rays are the longest (being  $7\frac{1}{2}$  inches long), and they are rather more than twice the length of the strongly-serrated first ray, which is superior in length only to the three last. The first *dorsal* fin (the base of which is 32 inches long) arises out of a groove, each margin of which consists of a loose fold of adipose skin. The first ray is jointed above, and is strongly serrate along its free edge, like the first rays of the pectorals and ventrals. The first fifteen or sixteen rays appear to be simple, the others sparingly branched; but the only perfect ray in my specimen is the fourth, and that is 12 inches long. The first ray of the *ventral* fin, though simple and strong below, is jointed above and ends in a weak point. The first two rays of the *anal* fin are short, the succeeding four long, and the remaining rays short. The anterior part of this fin is fleshy, and at the base of this part there is a groove on each side. The length of the base of the whole fin, compared with the total length of the fish, is as 1 to  $11\frac{1}{3}$ , instead of as 1 to 10 in Mr. Bennett's example. The *caudal* fin measures  $7\frac{1}{4}$  inches in length, and the tips of the lobes are 9 inches asunder.

Along the middle of each side on the posterior half of the body there is a low adipose keel of a black colour; and this marks the course, at this part, of the lateral line, which is unarmed throughout. The fish is covered with a thin smooth skin, and is entirely destitute of scales.

As to the *dentition*, there are at each side of the mandible, beginning at the posterior end, ten teeth of moderate size, directed backwards, and flattened, triangular, and pointed. Then come three long-pointed teeth, which decrease in length forwards; then five subulate teeth, having before them two long teeth on one side of the mandible, on the other only one; lastly, at the tip, one acicular tooth. The weak slender premaxillary is set with a single row of small sharp triangular teeth, about eighty-five on each side. The palatine bones are set posteriorly with a row of larger teeth, which, being flat, sharp, and triangular, resemble the teeth of a saw. They are directed backwards, and correspond in size and shape with the opposite teeth of the mandible. At the anterior part of each palatine bone is a row of seven or eight long formidable teeth, the hinder ones being larger; they are flattened, dagger-like, and are directed backwards. Behind these on one side are two long teeth, but only one such tooth on the other. The vomer is toothless.

With reference to the figure accompanying Mr. Bennett's description, it may be remarked that the nostrils are wrongly indicated, being much posterior to the place at which they are represented to be. They are really situated a little nearer the eyes than the snout. The two orifices of each pair, being small and close together, may have been overlooked; and a couple of slight depressions with a bony tubercle, in advance of their true position, have been apparently mis-

taken for them. Neither does the colouring of the figure well agree with my specimen, which, when fresh from the water, had a dark-bluish-grey back, with sides and belly of a silvery grey, reflecting a brassy lustre in certain directions of the light. The dorsal, pectoral, and caudal fins were a deep black; the ventral and anal fins a silvery grey. The indigo-blue spots in pairs near the lateral line in the figure seem to occupy the places of colourless mucous pores, which were observed in my specimen at irregular intervals near that line.

From this fish were obtained two species of Entozoa, viz. some large specimens of a *Distoma*, and several examples of a Tænioid worm, measuring altogether some feet in length.

## 2. REMARKS ON THE FRINGILLA INCERTA OF RISSO.

BY ALFRED NEWTON, M.A., F.L.S., F.Z.S.

Mr. George Dawson Rowley has entrusted to me, for exhibition to the Society, a little bird which was brought to him alive at Brighton on the 13th of March last, having been caught in a net in that neighbourhood. It was ascertained by dissection to be a female; and, after examining it, I cannot but suspect that it may have been from specimens similar to it that the descriptions of the female of the so-called *Fringilla incerta* of Risso and other Continental writers have been drawn up. I have never before seen a specimen which agrees with these accounts, nor have I had access to the original authorities; but the compilation from them published by Dr. Degland (Ornith. Europ. i. p. 202) so accurately describes the present example that I do not hesitate to quote it.

"*Femelle*: Dessus de la tête, derrière du cou, scapulaires, dos et sus-caudales d'un brun olivâtre, plus clair à la tête, nuancé de gris sur les côtés du cou et sur le haut du dos; poitrine et flancs d'un gris olivâtre, avec des taches longitudinales plus foncées; abdomen et sous-caudales d'un blanc sale; rectrices et rémiges, d'un noir olivâtre, avec le bord externe liséré de vert grisâtre, les premières terminées de gris sale, ce qui forme deux bandes sur les ailes; rectrices de la couleur des rémiges; pieds d'un brun fauve."

At the time of his writing the above passage, Dr. Degland states that the *Chlorospiza incerta* was unknown to him; but he subsequently says (*op. cit.* ii. p. 540) that he had obtained a male, taken in a net near Lille, in September, 1849, and adds that he was previously wrong in calling the species a *Chlorospiza*, for it was evidently a true *Pyrrhula*. This last assertion awakened the ire or the ridicule of Prince Bonaparte, who persists (*Revue Critique*, pp. 31, 32) in his former assignment of the bird to *Chlorospiza*\* (*Comp. List of Birds*, 1838, p. 30), as he also does later (*Consp.*

\* There is apparently a misprint of 1852 for 1832, as the date of the establishment of this genus, in Mr. G. R. Gray's most useful 'Catalogue of the Genera and Subgenera of Birds,' p. 77. In the 'List of the Specimens of British Animals,' &c., part iii. Birds, p. 100, the latter date is given, with the reference 'Pr. Bonap. Sagg. Distr. Met. Anim. Vert.'; but I have been unable to consult the original work.